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COVER: LTJG Deborah E. Bane, NC, administers polio vaccine at the Cluster Well-Baby Clinic, NRMC Corpus Christi, Tex. Photo by HM3 D.E. Evans.

The Naval Reserve: A Vital Part of the Total Force Concept

Early in his first year as Chief of Naval Operations, ADM Thomas B. Hayward, USN, issued seven "goals and objectives." One was to revitalize our "One Navy" approach to contingency planning. He made it clear that he would be involved, along with the rest of the Navy chain of command, in considering how the Naval Reserve can contribute to our Total Force concepts of mobilization. With this statement of concern by the Chief of Naval Operations, the Navy Medical Department has reviewed its status. I have held several meetings with the Reserve Medical Flag officers and urged that the Medical Reserve Policy Board present its recommendations. In concert with the Army and Air Force Surgeons General, a report relating to Reserve medical matters was forwarded to the Assistant Secretary of Defense for Health Affairs in November 1978. It was evident from the report that a major concern was the shortfall of junior medical officers and hospital corpsmen, and that recruiting and retention of Reserve physicians and hospital corpsmen needed priority consideration. Data indicated that the vital support of dental officers and dental technicians, Medical Service Corps officers, and Nurse Corps officers was being met with very few SELRES billets available to

accommodate many highly qualified and motivated personnel.


Every year our activities in and around BUMED are stimulated by studies and exercises. Operation "Nifty Nugget," a 30-day evolution involving the Joint Chiefs of Staff and all the CINC's around the world, dramatically demonstrated how vital the Naval Reserve is in providing the Total Force capabilities that our contingency planners forecast. That particular exercise revealed many shortfalls, but none as critical as the lack of hospital corpsmen.

A recently completed review of our Medical Department Reserve components concluded with the recommendation that the previously successful operational Reserve hospital units be re-established. It is anticipated that by 1 Oct 1979, we will have 101 Medical Contingency Reserve Units (MEDCRU's) on line with mobilization affiliations to our Navy regional medical centers. This program has the support of the Chief of Naval Operations, Chief of Naval Reserve, Commandant Marine Corps, and Chief of Naval Personnel. It is clear that the Medical Department Reserve represents a cadre of talented, dedicated, and patriotic men and women who are willing and ready to serve their country in time of need.

Total Naval Force requirements are determined by the national military strategy. The roles and tasks assigned to the U.S. Navy determine the structure of a Naval Reserve force necessary to support the Navy's mission and functions.

It is important that everyone understand the Navy organization, its mission, and how it functions so that we can "talk up" the Navy in our communities. You must have the ability to articulate the Navy's needs in clearest terms. I call upon each of you to bear some of our burden of recruiting and retaining capable people in our active and Reserve forces. We must have a capable Navy, and the American people need to hear our story. We, in the Medical Department, feel that our responsibilities are being met by capable, ready, and willing personnel. "One Navy" is not rhetoric but a viable, vital necessity for mobilization.

I ask for your "total team support" and hope you will do your share to make certain that our Navy remains second to none. I know you will and can do it!


W.P. ARENTZEN
Vice Admiral, Medical Corps
United States Navy

Medical Service Corps: Progress and Plans

CAPT Paul D. Nelson, MSC, USN

In the August 1978 issue of *U.S. Navy Medicine*, I outlined what I considered to be among the major challenges and opportunities facing Medical Service Corps officers as we look to the future. I did so with assistance from several of our senior officers, varied in professional specialty and service background, who shared their thoughts on "where we are" and "where we need to go." Revealed in that sample of opinions was a sense of diversity—diversity of problems, proposed solutions, professional aspirations, but also of available talent. But there was something else, too, in what those officers shared—a sense of common commitment and loyalty, a singularity of purpose achieved through different but equally distinguished naval service careers. My concluding charge to Medical Service Corps officers at that time was that we move forward together, with others of our Medical Department colleagues, in an attitude of "many talents, one team, one spirit." Now, one year later, I am even more convinced that we must do so, indeed. And I believe we are.

For the Medical Service Corps, fiscal year 1979 has been a year of inventory, of taking stock. It has also been a period of change. Our emphasis in all such activities has been on professional matters—to increase opportunity, challenge, and commitment. It was not only proper, therefore, but essential in my opinion that, under the recent BUMED reorganization, our Medical Service Corps Division return to a place alongside each of the other Medical Department Corps. For, with the interdependency of professional and technical roles in all phases of health care services, matters of professional development in any one corps potentially affects each of the others as well. Hence, we must work more closely together. And it is in that context that we have proceeded this year.

Better Communication

Perhaps the activity which has most characterized the Medical Service Corps Division this past year is that

of meeting people. It has been central to the process of taking stock. It has also been central to whatever change has occurred in policy, practice, or procedure. We meet with purpose—to define or solve problems, to plan and develop programs, to become better informed about policies or procedures, to sample points of view about issues, or simply, but importantly, to get to know one another better, personally and professionally.

We have met with colleagues from most other BUMED divisions, with colleagues of other services, with the Navy and Marine Corps line, and with our officers from field activities. Because of the diversity of roles among Medical Service Corps officers, there are very few issues or institutions in health care service with which we do not have some relationship. Hence, the problem areas about which we meet are great in number and vary in complexity. As time consuming as this is, it is absolutely essential if we are to effectively communicate and work together as one Medical Department team. That is our intent, and I think we are making some progress, in the field as well as at BUMED.

The principal catalysts in this communication process within the Medical Service Corps Division are CAPT Cherry Hatten, Deputy for Health Care and Sciences, and CAPT Vic Swindall, Deputy for Health Care Administration, each of whom is responsible for professional areas which embrace about 50 percent of our Medical Service Corps officers at this time. Other Medical Service Corps Division staff officers responsible for various aspects of our professional program development efforts are: LCDR Bob Brant who coordinates assignment and career planning, LT Ken Gibson who coordinates special analyses of our billet requirements and officer resources, and LT Bob Rodell (now at NRMC Memphis) who coordinated our procurement and officer accessions. LCDR Sal Profita has just recently joined our Division staff as well. The Division staff is also assisted by nearly 30 officers who serve as professional advisors in specialty areas of health care, science, and administration in which Medical Service Corps officers function (see List).

CAPT Nelson is director of the Medical Service Corps.

This past year, in addition to increasing the professional specialty areas and number of advisors in the health care administration field, we also appointed advisors for special institutional areas of service (e.g., Marine Corps, research, dental, education, etc.). Though in need of further refinement, this advisory system enables us to productively involve more officers in the process of reviewing policies and problems. It also allows us to simultaneously evaluate issues and problems affecting Medical Service Corps officers from both a professional discipline and institutional perspective. The advisors, in turn, are expected to be communication links to communities of officers in the field whom we encourage, of course, to meet just as the advisors do across professional disciplines within their respective field commands on many of the same problems and issues.

Getting Out in the Field

In addition to meeting with people at BUMED, it is our plan and it has been my privilege to visit our field activities. With solid support from the Surgeon General, I was able this past year to visit in CONUS about 60 percent of our naval hospitals and regional medical centers, 50 percent of our dental facilities, 90 percent of our training facilities, 80 percent of our environmental and preventive medicine facilities, 70 percent of our research facilities, and 60 percent of our headquarters and other staff activities. I visited officers who work in the shipyard environment, aboard ship, and with the Fleet Marine Force. I met with nearly all of our newly commissioned officers for informal exchange and with those officers in the several new health care administration short courses at the Naval School of Health Sciences, Bethesda, Md. In all, I have met with, either personally or in groups, what I estimate to be over 900 officers, half of our Corps strength. In so doing, I tried to learn from the perspective of the officer in his or her duty environment. Consequently, I made an effort to meet with other Medical Department and line officers with whom and for whom we serve. I plan to continue doing this for it has given me much greater appreciation for the problems faced by our Medical Department, the aspirations and concerns of our officers and petty officers as well, and respect again for the great diversity of talents available to us.

For those who serve in the more remote activities, who may be at sea or on overseas deployment, but whom for one reason or another it has been difficult for me to visit to date, let me assure you at this point that you are not forgotten. The greater than usual sacrifice you and your families make in many such instances is

Medical Service Service Corps officers who served as specialty advisors during FY 1979 are:

Health Care Administration/Institutional Advisors

CAPT L.E. Angelo (Data Processing/MIS)
CAPT L.B. Nichols (Facility Construction)
CDR G.S. Harris (Marine Corps)
CDR A.D. Hatten (Patient Services)
CDR J.J. Kehoe (Dental)
CDR C.R. Loar (Quality Assurance)
CDR R.F. McCullagh (Fiscal/Supply)
CDR O.L. Wood (Research)
LCDR E.A. Donohue (Naval Reserves)
LCDR A.W. Frost (Food Service)
LT J.A. Kramer (Education/Training)

Health Care and Science Advisors

CAPT E.S. Hochstein (Podiatry)
CAPT S.W. Joseph (Bacterial/Microbiol/Parasitol/Virol)
CAPT M. Springer (Dietitian)
CDR W.M. Beckner (Radiation Specialties)
CDR R.J. Biersner (Research Psychology)
CDR A.R. Dasler (Physiology)
CDR H. Delaney (Occupational Therapy)
CDR R.S. Gibson (Aero Psychology)
CDR J.R. Lucas (Pharmacy)
CDR R.D. McCullah (Clinical Psychology/Social Worker)
CDR P. McKelvy (Physical Therapy/Med Spec Sect)
CDR J.A. Mulrennan (Entomology)
CDR W.M. Parsons (Environmental Health)
CDR D.H. Reid (Aero Physiology)
CDR L. Roach (Optometry)
CDR D.E. Uddin (Chem/Biochem/Pharmacol)
LCDR C.W. Baker (Industrial Hygiene/Audiology)
LCDR D. Schubert (Medical Technology)

very much appreciated. But regardless of where you serve, with continued good performance, you will not "drop a stitch" in your career progression. Each assignment should be an important learning step in your career. If it hasn't been to date, we plan to make it that way in the future. I am fully aware that there are many duties less popular and certainly less comfortable than others. But all are essential. We need every bit of the high quality in officer performance at those assign-



LCDR W.M. Parsons, MSC (left) aboard the USS Mahan for an environmental health consultation.



An MSC officer reviews strip chart recordings during evaluation of personnel radiation dosimeters.

ments as we do at the more visible and popular assignments. Just this year, for example, we increased by request the number of Medical Service Corps officers assigned to Navy recruiting, a most critical problem area for our Medical Department and for the Navy in general. And, we selected top performers to do the job. The same is true for such other assignments as the Fleet Marine Force, shipboard duty, and BUMED duty, as well as in our selection of Medical Service Corps candidates for staff and command colleges of the services.

Assignments

At the middle to senior grade levels our executive assignment slates this year were based upon several criteria of officers qualification;

- performance,
- type and variety of duty experience,
- professional achievements and honors,
- education, and
- leadership qualities matched against Navy needs and billet requirements.

Interests in a particular assignment are certainly considered, but only after an officer appears professionally qualified for that assignment.

We are also striving to challenge our officers with higher levels of responsibility as early as possible but without giving too much too soon. A few of those assignments are perhaps seen by some to be wrong or at least contrary to what has been. That will probably always be the case. But we must recognize the variety of talents required in our total mission and also be

aware that those talents exist to different degrees in different persons. And we must identify and cultivate these talents early in our officers' careers. For some, the flair for leadership is less of a personal capability than strength in a technical area. In others, the opposite might be true. Some may be better in field command situations; others are perhaps better headquarters staff executives. The point is, however, that all are important in the overall mission. And we are in critical need of all such talents in our senior officers. We need the technical specialist every bit as much as the generalist, the officers for staff as well as for command.

Career Development

This finally brings me to the issue about which our officers seem most concerned, one about which I am most frequently asked questions, and one about which there appears to be little information available. That is the issue of career planning. I mentioned it in my article in *U.S. Navy Medicine*, August 1979 and the Surgeon General wrote about it in his January 1979 letter to all Medical Service Corps officers. By virtue of our mutual regard for its importance, it is the top priority issue for the Medical Service Corps Division in fiscal year 1980. Our objective is to develop prototype career planning models for all Medical Service Corps specialties by this time next year. They should be sufficiently general as to be flexible, a necessity in our changing environment. However, they must also be sufficiently specific to be useful to individuals and groups of officers.

The career planning models should benefit manpower planning, resource budgeting and acquisition,

the development of officer education, training, and assignment policies. The local commands and our Medical Service Corps advisors must also find them suitable for personal officer counseling and guidance. We will strive to give officers some choice at various points along the way. But we must also develop models which enable us as a professional corps of the Medical Department to meet the requirements of our mission under standard and contingency conditions of operation. As officers of different professional specialties in health care services, our roles will not be the same, nor will our preparation for those roles. But as officers of the Navy Medical Department, we must be commonly aware of our mission, committed to its fulfillment, and prepared in whatever way appropriate to serve toward that end.

With career planning models, we can more meaningfully address such issues as the following: specialization vs. generalization, tour rotation and assignment policies, inservice vs. direct procurement, education and training requirements, mid-career shifts in specialty area, operational and staff duties, and opportunities for executive growth. Realistically, I am well aware of the personal and situational forces that shape the careers of men and women. But models are not necessarily prescriptions for any one individual's career. Rather they should be regarded as aids by which to plan in more systematic ways, hopefully with mutual benefit to the individual and organization. We have much work to do, and we need the help of everyone before we are through. Meanwhile, a number of activities have already been initiated this year.

New Options

Under the direction of CAPT Hatten and CAPT Swindall, with contributions again from the specialty advisors and other BUMED staff, we have begun to analyze current and potential requirements for Medical Service Corps officers of all specialties under standard and various contingency conditions. Those requirements must be the basis for our billet structure, which we are also reviewing at this time in terms of professional function.

Simultaneously, the Navy SHORESTAMPS program is approaching the billet structure from a workload perspective. We are remaining abreast of that effort. In the final analysis, the need for billets and the professional functions performed therein determine the organization's requirements for a career plan. They should guide our specialty requirements, our education and training, and our assignment strategies. But we must also consider the individual's interests, attitudes, and

goals. For, until we know something of the latter, we cannot attempt to strike a balance between the individual's and the organization's needs.

Consequently, through the contributions of our specialty advisors and other BUMED offices as well as from the Naval School of Health Sciences, we have already assembled a variety of draft career plan options for many of the Medical Service Corps specialty areas, administrative, scientific, and clinical. While that effort continues, we are also planning a study of our Medical Service Corps officers, how they view their professional careers, the organization, and their jobs. Proposed for a start in fiscal year 1980 and now in final design stage, the study will be conducted through the staff of the Naval School of Health Sciences, in collaboration with the Naval Health Research Center, San Diego, Calif. In time, it is anticipated that the resulting data will be useful in fine-tuning the initial prototype career planning models for Medical Service Corps officers.

The Future

In balance, this has been a busy year and a productive one. We have more billets to fill than we did a year ago due to expansion of such health care services as clinical psychology, pharmacy, and medical technology. We also obtained OPNAV approval for two new specialties, clinical audiology and social worker, to further extend our capability at selected Naval Regional Medical Centers. Overall, we project about 1,850 officers on board by fiscal year end, about 60 percent of whom are billeted in patient care activities. But we are increasing our emphasis, as well, on billets which directly support the fleet, especially in the various science specialties related to preventive, occupational, and industrial medicine.

In all, our Medical Service Corps officers serve in approximately 250 different commands and staffs. In more than 20, they serve as commanding officer. In more than 40, they serve as officer in charge. The opportunities for executive growth are not only in field commands, but in senior headquarters staff positions of fleet and shore establishments alike. And though we are short of authorized strength in our senior grades, the potential is there for our permanent career officers who comprise about 65 percent of our overall strength at this time.

Though we have problems, I believe the health of the Medical Service Corps is sound; certainly, the professional challenge has never been greater. As we mark our 32nd anniversary as a Corps, let us unite behind the leadership of the Surgeon General and enter the new decade ahead as "partners in productivity."

Cluster Well-Baby Clinic

CDR Claire M. Cronin, NC, USN

Minutes! Hours! Quality time! Quality Care! Everyone connected with health care has struggled with the problem of making the best possible use of clinic hours for quality health care. One innovative solution to this problem, Cluster Well-Baby Clinics, is working at the Pediatric Clinic, Naval Regional Medical Center, Corpus Christi, Tex.

Inherent Difficulties in Traditional Approach

The traditional approach to well-baby care—a series of 20-minute individual appointments—had some inherent difficulties. Answering the same questions for 12 to 15 mothers, was physically and mentally exhausting. Trying to cram basic infant health care into 20 minutes along with examining the child and giving immunizations did not leave enough time for individual problems or concerns that the parents might have. The obvious solution was to restructure the time we were spending.

The nursing literature reports a successful trial concept of group well-baby visits.⁽¹⁾ In the early sixties at another military facility, the clinic's Chief of Pediatrics, Dr. M.A. Woodall, innovated lectures to groups of mothers prior to the well-baby examinations. In addition, we had successfully used group teaching in our prenatal classes and postpartum discharge classes. Based, then, upon past experiences and present need, the following cluster program was organized. Initially well-baby appointments were scheduled for six weeks, three months, and six months after birth. The reorganized time schedule allowed us to expand to two-week, two, four, and six-month appointments as well. The visits were planned as following.

Cluster Well-Baby Clinic Schedule

0800-0815: Check-in Time. The nurse staff obtains measurements of weight, height, and head circumference of all babies. The appropriate well-baby forms are completed including dietary history and any current problems.

0815-0830: Educational film strips are shown, appropriate for age groups on such topics as feeding, safety, infant communication, and normal growth and development.

0830-0900: A lecture by the pediatric nurse practitioner is followed by discussion and questions and answers.

0900-1000: Individual exams are performed by the pediatric nurse practitioner and pediatricians. Individual problems are handled at this time. Immunizations are given after the exam.

Repeated Instructions Replaced

Replacing the often-repeated instructions to each individual mother is a lecture by the pediatric nurse practitioner. Lecture topics are structured to relate to the age of the babies scheduled to be seen. In the two-week clinic, for example, information concerning infants' crying, feeding, problems with colic, and maternal and infant bonding is stressed. In subsequent clinics, such topics as growth and development, nutrition, safety, immunizations, teething, toys and play, and family relationships are discussed.

Emphasis is placed on the psychologic as well as the physical needs of both infants and parents. Besides the concept of maternal/infant bonding, information about infant stimulation and learning needs, separation anxiety, and sleep disorders is provided by the nurse practitioner. There is opportunity to educate as well as reassure parents, especially those experiencing parenting for the first time.

Recent concepts in infant nutrition are taught, including the need for iron-fortified formula until one year of age, delaying introduction of solid foods until six months of age, and the risks of obesity and iron-deficiency anemia. Parents are instructed how to make their own baby foods, how to intelligently read baby food labels, and how to choose baby foods.

At the end of the lecture, the parents receive a printed sheet of information covering all the topics discussed. They are also urged to take home the many educational pamphlets available in the clinic concerning the same subjects.

Question and Answer Session

A question and answer session immediately follows the lecture. The session has numerous advantages. Experienced mothers add helpful information and support. Inexperienced mothers realize that theirs are not isolated problems, and they are not necessarily "bad" mothers because their child cries or refuses to eat, etc. Parents share opinions of baby products which is helpful, especially to novice mothers.

CDR Cronin is assigned to the Naval Submarine Medical Center, New London, Groton, Conn. 06340.

Reprinted with permission of *Pediatric Nursing*, 5(2), March/April 1979.

The parents benefit, and so does the pediatric nurse practitioner. The question and answer sessions supply me with much practical, common-sense information on child care. In addition, I am able to obtain feed-back from previous clinics. For example, a common problem is a parent's concern over reactions to immunizations. I can ask, "Were you prepared adequately for the reaction?" In most cases, the answer is "yes."

The question and answer session also allows for a supportive atmosphere to develop among the attending parents. At a recent two-week clinic, an exhausted mother of two asked, "How can I get my husband to help me care for the children. He feels they are my responsibility." Several parents in the group immediately responded with tales of similar experiences. The young mother eventually followed their advice to initiate frank discussions with her husband easing the situation. Would this problem have surfaced during a traditional visit? Now, I remember to raise the question in my discussion of parents' roles.

The lectures with their question and answer sessions provide opportunities for parents to observe similarities and differences among a variety of infants. For example, during a fourth-month clinic, a mother of a breast-fed baby noted that he looked much smaller and underweight in comparison to the other babies. The baby did, indeed, have a decided drop in weight and the problem was subsequently corrected.

Another mother in the sixth-month clinic noted that her seven-month-old did not favorably compare in development in comparison with the other babies. This child is presently being evaluated for developmental delays. The parents have welcomed this opportunity that they otherwise would not have had.

Advantages

In analyzing the program, advantages can be determined for both parents and medical staff. The program allows mothers to meet and share mutual problems and concerns. A common remark is, "It helps to know that I'm not the only one with that problem." The empathic atmosphere is vital to military families, many of whom are headed by young, inexperienced, low-income parents thousands of miles away from friends and relatives. The clinic provides an extended-family atmosphere that is psychologically supportive as well as providing medical care and treatment.

The indepth educational program including the film strips and lectures provides 45 minutes of educational time that covers many more topics than the individual 20-minute appointments could not offer.

Since the program is designed specifically for well-

babies, there is little or no exposure to sick children. The Well-Baby Cluster Clinics are held regularly two days a week from 0800 to 1000. The emphasis is entirely on caring for the healthy child.

The advantages to the professional staff are numerous. Primarily there is a better use of physicians' and nurse practitioners' time. For example, three care givers can now provide care to 15 babies in one hour's time. Under the previous structure of individual 20-minute appointments, this would have required five hours of clinic time. A 40 percent increase in time saved demonstrates the efficiency of the program.

Another plus has been the increased job satisfaction for all the members of the clinic staff. There has been a noticeable increase in the nursing staff's interest and participation since the program began. The first hour of the clinic depends heavily on the efficiency of the nursing staff in completing the weighing, measuring, etc. The staff is now able to recognize and identify potential problem areas and bring them to the attention of the medical team.

Another benefit of the program has been the expansion of health services at a time when staffing was reduced. The addition of two-week, two- and four-month visits to the schedule of six-week, three-month, and six-month appointments has fulfilled definite needs in the overall health care of these children. Problems are now more quickly detected before they become major complications.

Disadvantages

Some disadvantages are inevitable in any system. The limited choice of times for appointments is a problem for some parents. Working mothers may have difficulty participating. Although further research needs to be completed, it appears the group approach may not allow for the one-to-one relationships to develop between the parent and the health-care giver as the traditional appointment system allowed.

The cluster well-baby approach is appropriate only for younger babies, birth to six months of age. At times, the noise level during the sessions is a problem. Having volunteer workers available to comfort crying babies might alleviate this drawback.

Parents' Response to Cluster Clinics

A questionnaire was developed to survey parents' opinions of the newly developed cluster clinic. Parents were asked to evaluate check-in procedures, the clinical staffs' attitudes, the educational film strips, the lecture by the pediatric nurse practitioner, the lecture discussion, the question and answer session, and the indi-

vidual baby examinations by the practitioner/pediatrician. Comments or suggestions they had for improving the health care procedures were also requested.

The evaluation of the clinic since its initiation in May 1977, has been generally positive. Approximately 90 percent of the respondents indicate they prefer to attend the cluster clinic rather than return to individual appointments.

Practitioner's Response to Cluster Clinics

My own response to the cluster clinics is extremely positive. I have time for teaching parenting. There is

time to provide the "whys" for parents not just the "hows." Time is available to better care for the psychologic as well as the physical needs of my patients.

Health care has improved through the establishment of the two-week post-hospital discharge clinics allowing for early detection of newborn problems. The closer followup between visits has resulted in fewer problems with feeding, obesity, and colic.

Reference

1. Feldman M: Cluster Visits, *Amer J Nursing* 74:1485-1488, August 1974.

New BUMED Alcohol Rehab Instruction

The Bureau of Medicine and Surgery has revised its Alcohol Rehabilitation and Treatment Instruction to clarify procedures for admission and discharge to Alcohol Rehabilitation Services. BUMEDINST 6330.2B of 21 May 1979 includes some additional requirements which the Navy medical community should be aware of. These new requirements are summarized below:

Acceptance of Intoxicated Personnel in Emergency Rooms

BUMEDINST 6330.2B includes a provision that "Personnel presented to emergency rooms of medical facilities suffering from prolonged or severe quantitative ingestion of alcohol will be admitted for detoxification in accordance with OPNAVINST 6330.1, whether or not withdrawal symptoms are imminent." The above statement was incorporated into BUMEDINST 6330.2B because emergency room attendants often overlook important symptomatic indications to "avoid admitting the drunk" who may be disruptive and difficult to handle. Activities are cautioned not to turn away intoxicated personnel who in fact may need treatment and detoxification. Failing to admit obviously intoxicated personnel who exhibit impairment of judgment or physical dysfunction creates an important ethical consideration for the admitting facility. The patient could receive serious bodily harm or even die from aspiration of gastric contents, seizure, or accidents influenced by the intoxication. In the past, intoxicated personnel who were turned away from emergency rooms, and who injured or killed themselves or others were generally not an embarrassment to the contact facility. Today, the public, press, and courts demand that treatment facilities give account of their actions.

Criteria for the Diagnosis of Alcoholism

BUMEDINST 6330.2B directs medical department personnel to utilize NAVMED P5116, "Drug Abuse (Clinical Recognition and Treatment, Including the Diseases often Associated)" when dealing with intoxicated personnel or when reviewing medical records exhibiting symptomology of alcoholism. Especially helpful is Appendix E concerning "Criteria for Diagnosis of Alcoholism." This publication should be available to all physicians and emergency room personnel. Copies can be obtained from the Bureau of Medicine and Surgery (MED-53), Navy Department, Washington, D.C. 20372.

Blood Alcohol Levels

BUMEDINST 6330.2B requires that a test for blood alcohol level be conducted for all patients seen in emergency rooms whenever the practice of good medicine requires it. Although many consider such testing as an invasion of privacy, it is considered a good practice to insure that blood alcohol levels are *known and recorded* by emergency room personnel. There have been cases in the past where personnel with heavy alcohol intake have been admitted for treatment for reasons other than alcohol intoxication. They have not necessarily exhibited the symptoms of drunkenness due to a high tolerance for ethanol. There is a danger of administering drugs to these patients which may have a synergistic effect with alcohol. Additionally, there are recorded cases where personnel have been admitted for treatment with high alcohol intake not apparent at admission, who have developed serious ethanol withdrawal complications. It is essential that emergency room personnel insure that blood alcohol levels are recorded whenever doubt exists.

Recent Publications by Navy Authors

The following are papers published or issued by Naval Medical Research Institute military and civilian investigators at NNMC Bethesda, Md., since the beginning of 1979.

Molar Absorbence of Cyanmethemoglobin From Blood of Different Animals by Rodkey FL, Robertson RF, and Kim CK. *American Journal of Veterinary Research* 40(6):887-888, 1979.

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U.S. Navy Cold Weather Medicine Training Course: A Challenge Met

LT Donald C. Arthur, MC, USN

It's a beautiful winter's morning: 10° F and 12,500 feet elevation at Champion Pass in the majestic mountains of Colorado. We awaken in the warmth of our sleeping bags to discover that a few inches of newly fallen snow have blanketed our thin rainfly and hidden our gear outside. The sky is clear, the air crisp with no hint of the night storm which caused an avalanche within sight of our bivouac. We dress for another exciting day and begin preparing hot Ralston, fruit, fresh biscuits, and cocoa. A vibrant sense of excitement fills the air as it has each morning for the two-week Cold Weather Medicine Training Course with the Colorado Outward Bound School (COBS) sponsored by the Naval Health Sciences Education and Training Command (NHSETC), Bethesda, Md.

The Navy Medical Department has been challenged. Can we meet the needs of the Navy and Marine Corps on maneuvers in a high altitude, cold weather climate? Used to the tropical arena, our fighting men are unaccustomed to the vastly different demands of the cold and high altitude. Medical hazards await the unprepared, the untrained, and the careless. The Medical Department has been charged with preparing and training troops in the prevention, treatment, and evacuation of injuries and accidents indigenous to this environment. Such hazards include High Altitude Pulmonary Edema (HAPE) with its insidious and unpredictable onset, Acute Mountain Sickness (AMS),

hypothermia—the silent stalking killer, debilitating frostbite, snow blindness, psychologic stress, dehydration, and on and on!

The ill-prepared state of our troops was evidenced all too graphically by the 24 March 1979 *New York Times* headline; "Marines at 'War' in Norway's Arctic, Don't Cut." This referred to the annual NATO maneuvers that simulate the defense of northern Norway from Soviet attack. The Soviet naval base lies to the east of Murmansk. For the Soviet armadas posted at this, the world's largest naval base, to safely pass into the Arctic Ocean in time of war, northern Norway must be occupied. We are pledged by treaty to assist the Norwegians in this totally unfamiliar climate. As the article illustrated in embarrassing detail, we are unprepared. The article went on to describe that Marines flown from Camp Lejeune, N.C., and reservists from the Albany, N.Y. area were burdened with old, heavy, and inadequate equipment. But their greatest burden was their lack of proper training in preventive measures and their lack of familiarity with the environment. The result was substantial and unnecessary morbidity.

The Bureau of Medicine and Surgery and HSETC have accepted the challenge and developed an exciting training program for Medical, Nurse, and Medical Service Corps officers and hospital and fleet duty corpsmen. The program begins with a three-day seminar introducing the participants to the theories of survival in the cold (see Table) with emphasis on prevention—prevention of accidents as well as disease. Then the fun begins—and the hard work. The next 10 days are spent with the Colorado Outward Bound School basecamped at Leadville, Colo., the highest inhabited settlement in North America at 10,000 feet above sea level. Here expert civilian instructors, all experienced ski patrollers

LT Arthur participated in the Cold Weather Training Course as an accredited part of his internship at NMMC, Bethesda, Md., and is presently attending flight surgeon training at the Naval Aerospace Medical Institute, Naval Air Station, Pensacola, Fla. 32508.

Pre-Cobs Course Preparatory Seminar Outline

- I. General Objectives
 - A. Experiences and needs for cold weather medicine training in the military today
 - B. Logistical considerations
 - C. Medical considerations
- II. Medical Aspects
 - A. Cold physiology and adaptation mechanisms
 - B. Disorders peculiar to the cold and altitude
 - 1. High Altitude Pulmonary Edema (HAPE)
 - 2. Acute and Chronic Mountain Sickness (AMS & CMS)
 - 3. Hypothermia
 - 4. Frostbite
 - 5. Snow blindness
 - 6. Epidermal/dermal water injuries
 - 7. Psychologic stress
 - 8. Nutrition and hydration
 - C. Principles of medical management
 - D. Problems of medical management in the cold and altitude
 - E. Principles of preventive medicine and heat regulation
 - 1. Clean, Dry, Wool
 - 2. Fabric comparisons
 - 3. Layer system
 - F. Hygiene and Sanitation
- III. The Environment
 - A. Weather patterns, thermal layers, cloud formations and their meaning, anatomy of a weather front—how to know what to expect
 - B. Physics and mechanics of snow types and deposition patterns; changes of aging, wind and sun exposure, and compaction
 - C. Mechanics of avalanche formation with focus on recognition of potential sites
 - D. Map and compass use with emphasis on guidance by topography and safe route selection
- IV. Search and Rescue Techniques
 - A. Avalanche rescue techniques
 - B. Basic first aid and stabilization with emphasis on the team approach
 - C. Evacuation techniques
- V. Principles of the Bivouac
 - A. Site selection
 - B. Organization of the site
 - C. Division of labor
 - D. Sanitary and ecologic considerations
- VI. Diet Planning

and wilderness travelers, teach the practical aspects of survival in the high altitude cold. From the first day, you don cross country skis and are out in the snow learning to be a part of the environment. You are taught how to keep warm, treat and evacuate the incapacitated, recognize avalanche potentials, rescue avalanche victims, set up a bivouac, and cook tasty as well as nutritious meals.

The next three days comprise the "basic" expedition where the emphasis is on the application and perfection of the tasks you have only simulated thus far. You learn to camp and survive in the grand wilderness; but the most important lessons are of respect and confidence—respect for an unforgiving environment that offers no support and confidence in yourself to overcome it. You recognize that nature is never really conquered. She merely allows you to survive as long as you're cautious, knowledgeable, and respectful. As your caution becomes automatic, your respect and appreciation of the power and beauty about you grows. It is both humbling and exulting. You feel as if you have been taken within nature's womb and made a part of her. You are no longer an intruder. You learn to take full advantage of the environment by building igloos and snow caves where you can be warm at a constant 32° F while the sub-zero weather is harsh outside. It snows and you learn yet another lesson—kitchenware should not be left uncovered and unmarked lest you search and search in the early light of morning.

Returning to basecamp, you're now confident that you can not only survive in the cold but enjoy every minute of it! After a triumphant "basic" expedition, you're now ready for the "Alpine" expedition. This time, the planning, route, pace, and destination is your responsibility, no longer the instructors' as on the "basic." This is the test you've been preparing for. The group is divided into subgroups according to general physical conditioning and skiing ability. The stronger choose the higher and longer routes while the others select less demanding, yet equally rewarding paths. Early the next morning the groups set out to test their new skills on a five-day excursion over the scenic and historic Colorado Rockies. The beauty of the towering 14,000-foot peaks contrasted with the pathos and struggle that we felt must have accompanied those who worked the 19th century iron mines in this remote ore-rich land.

Our group of six (four men and two women) took the long and high route over scenic Champion Pass, the 19th century focus of iron mining in Colorado. We left the basecamp on skis, carrying all the necessities for survival on our backs, and journeyed nine miles through the San Isabel National Forest. Our path took



Troops on skis with full packs (center) moving in open mountain ranges at 11,000 feet near Champion Pass, Colo.

us along the frozen Halfmoon Creek between successive 12,000 and 13,000-foot peaks with their avalanche trails looming above us. Toward dusk we challenged a steep incline and came upon the first remnants of the courageous men who lived year-round in this hostile environment. Their 100-year-old log cabin, weatherbeaten with wind howling through the cracks and beneath the poorly fitting door, was still a welcome sight in this uncivilized land. The meager heat emitted by an ancient wood-burning stove warmed our bodies and our hearts as we felt ourselves drift into the past. We felt a respect for and an identity with our predecessors and a special sense of camaraderie with each other and a sense of accomplishing a common goal yet only partially achieved. We enjoyed a comfortable night in what seemed like heaven in the midst of a wilderness.

In the following days, we traveled steadily up to the high country passing the old Prospect Mine and on to Champion Mill at 12,000 feet. We camped within sight of the 12,500-foot pass we were to cross the next day. Champion Mill, one of the oldest iron mills in Colorado, received its ore by giant tramway connecting it to the Champion Mine, a mile away and a thousand feet higher in elevation. The deserted mill revealed the skeletons of a foundry which once converted iron ore to pellets that were transported by mule cart to Leadville 15 miles away along the same path we had just traveled.

Onward we went over Champion Pass where we had planned to drop our packs and ascend the peak to 13,700 feet, returning to collect our gear and continue. The unpredictable mountain weather had other plans for us. What was a clear and inviting sky in the early

morning had turned to a blinding blizzard by noon with 30 mph winds. We were in avalanche country and knew that the danger of new slides was greatest during and just after a storm, especially if the snow was the wet and heavy type as was falling. The journey up to the pass was steep and slow; our feet were becoming cold and still in the leather boots. A cardinal rule in the mountains is that you must not allow your feet to get cold; this is the first sign of trouble. Now was the time to practice the lessons learned in the comfort of the basecamp. Those with cold feet paired off, removed their boots and socks and placed their feet under each others' arms to warm them. We all felt responsible for each others' survival; indeed we were no longer six individuals. Our energies and resources had been molded into one. After a half-hour revival, we continued our trek until at last we reached the pass. Visibility was a mere 100 feet and the wind howled, whipping the cold air and snow about us. We quickly abandoned our plan to ascend the peak and turned our attention to proceeding to safety below the tree line as soon as possible.

We stood on a wind-swept pass at 12,500 feet in a white-out blizzard facing a long and difficult ski down to safety along a path between successive avalanche trails. Our feet were again chilling and we were tired from the steep ascent to the pass. It was at this moment that we realized that if an accident were going to happen, it would be now—the worst possible time. We sharpened our senses to prevent it and recalled the

lessons of safety and evacuation of victims under such harsh conditions. We then cautiously made our way to safety in the Lackawana Gulch.

Our last night was spent in proud reflection of the challenge we had met as we enjoyed dinner around a blazing fire. Early the next morning we joined the other group and shared adventures. RADM [Stephen] Barchet, MC, USN, from HSETC joined us at basecamp that evening to learn of our impressions of the course and to share our enthusiasm for the program. It had taught us the fundamentals of cold weather survival and principles of preventive medicine and allowed us to test them in the field. In addition we learned to cross country ski and survive in the rough mountain winter. But most importantly, it had given us confidence that we could use our knowledge, transfer it to others, and apply those newly found skills and confidence within the special world of Navy medicine. It was a mission accomplished.

The goal of the Cold Weather Medicine Training Course is to provide personnel specific training to give medical support in cold weather, to provide training and support to the Marines and our ships in Arctic waters, and to instruct others in these vital skills. These select people will provide evidence that the members of the Medical Department are capable of living with the troops in the cold, helping prevent injuries and attending to those that do occur. The troops' confidence in us will go far in making their job easier.

Selection priority for participants will be given first to those who are most apt to move with their troops and those in a position to instruct others. Plans are already under way for next year. Four more courses containing 36 participants each will be offered. Training will be for both individuals and preselected teams who would train together and be able to move together as an integrated functional medical unit including surgeons, internists, nurses, corpsmen, and Medical Service Corps officers.

Can you go? YES! The only requirement is that you possess a spirit of excitement and adventure. Participants have ranged from 22-year-old Seals to 40-year-old FMSS Chiefs to 5' 2", 100-pound women. All carried their 60-pound packs from start to finish and loved it. The air is thin and the work is difficult, so good physical conditioning is essential and smoking is a decided handicap.

For further information, contact either: RADM Almon C. Wilson, MC, USN, Commanding Officer or CAPT B. Dutton, MC, USN, Head, Department of Operational Medicine, Naval Health Sciences Education and Training Command, National Naval Medical Center, Bethesda, Md. 20014. Telephone Autovon 295-0023 or Commercial (202) 295-0023.



Champion Mill—the remains of a once busy iron ore mill at 12,000 feet in the Colorado Rockies.

Continuing Education in the Nurse Corps

CDR F.C. McKown, NC, USN

The overall authority and responsibility for education and training in the Navy Medical Department resides in the Naval Health Sciences Education and Training Command (HSETC), Bethesda, Md. HSETC, under the immediate direction of the Chief, Bureau of Medicine and Surgery:

- Implements policy and exercises control, administration, and management of health sciences education and clinical investigative training programs of the Department of the Navy;
- Develops plans, objectives, priorities, organization, procedures, and standards to meet education and training requirements;
- Establishes, evaluates, and maintains optimal health sciences education and training programs that will insure maximal responsiveness to the operational and professional needs of the Naval services; and
- Provides budgetary support for the training activities and programs of the Medical Department of the Navy.

Within HSETC, the Director of Nurse Corps Programs acts under the policy guidance and direction of the Commanding Officer to fulfill the responsibilities listed above for the education and training of Nurse Corps officers, maintaining close liaison with the Nursing Division, Bureau of Medicine and Surgery. Currently, Nurse Corps education programs include full-time duty under instruction, part-time outservice training, and continuing education.

Full-Time Duty Under Instruction

Nurse Corps officers interested in requesting full-time duty under instruction leading to a baccalaureate or master's degree and those officers requesting the Primary Care Practitioner Program at NRMCMC San Diego

should consult the BUMEDINST 1520.14 series. This instruction specifies the programs available and the application procedure. Applications for full-time duty under instruction will not be accepted until the individual is within 18 months of their PRD. The next Professional Advisory Board meets on 15 Oct 1979 and all applications must be in HSETC by 1 Sept 1979. Starting in May 1980, the board will meet on an annual basis, with applications required by 15 March.

Officers selected for duty under instruction will apply at an NLN-accredited university of their choice, however, cross-country travel will not routinely be authorized and PRD's cannot be shortened to coincide with school entrance dates. It is important to remember these restrictions when selecting a school. Prior to making application for duty under instruction, the current list of NLN-accredited programs should be consulted. Nursing education, nursing administration, research, a clinical specialty, or a combined clinical and functional component are all acceptable majors for graduate education. Applicants should review graduate school entrance requirements prior to applying for school to insure eligibility for admission and satisfaction of prerequisites.

As a prerequisite for the Nurse Anesthesia Program, applicants must have one year of college-level sciences, to include one semester of chemistry with a demonstrated aptitude for science and mathematics. This program, conducted at the George Washington University, Washington, D.C., and the Naval School of Health Sciences, Bethesda, Md., is a one-year didactic course followed by a one-year clinical phase at Naval Regional Medical Center, San Diego or Portsmouth.

Nurses applying for the Navy's one-year Primary Care Practitioner Certificate Program should indicate in the application their preference for a specialty of pediatrics, family care, or Ob/Gyn.

Part-time Outservice Training

Nurse Corps officers interested in attending courses related to areas of Medical Department responsibility should consult the BUMEDINST 1500.7 series. This

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instruction specifies the eligibility, obligated service requirements, and the application procedures. Those interested in full-time duty under instruction can frequently satisfy prerequisites and obtain numerous transferrable credits through this program.

Continuing Education

With the rapid increase in technology, advances in medical science and changing health care concepts, continuing education for Nurse Corps officers is a vital component of quality health care. The BUMEDINST 4651.1 series delineates BUMED policy in support of continuing education. Funding for continuing education is the responsibility of local commanding officers. However, HSETC has limited funds available for attendance at those civilian and military short courses, workshops, and seminars which award continuing education credit. These funds must be used judiciously. They do not include conferences, conventions, institutes, or lengthy job-training courses. Requests for funding should arrive in HSETC four to six weeks before the course and be accompanied by a descriptive flyer or brochure. Normally, cross-country travel will not be authorized for the courses. Approval cannot be granted for requests arriving at HSETC after the starting date of the program.

HSETC annually co-sponsors, with NRMCMC's, courses particularly relevant to the needs of Navy nurses. It is anticipated that the FY80 Nurse Corps education calendar will include:

- a nursing symposium, in conjunction with the AMSUS Convention in San Diego
- The Perinatal Period (NRMCMC, Portsmouth)
- Physical Assessment of the Adult (two courses at NRMCMC, Corpus Christi)
- Middle Management (NSHS, Bethesda)
- Senior Management (NSHS, Bethesda)
- Character Disorders (NRMCMC, Oakland)
- Education Workshop (NRMCMC, Oakland)
- Alcoholism and Food Abuse (NRMCMC, Long Beach)

The completed calendar will be sent to all commands in the near future.

In 1977, HSETC received a four-year accreditation by the Northeast Regional Accrediting Committee of the American Nurses' Association as a Provider and Approver of Continuing Education. A pilot study is currently underway whereby HSETC Provider status may be given to certain Naval Regional Medical Centers in recognition of the extremely high quality education courses being developed locally, and to reduce the administrative burden of approving these courses for continuing education credit.

It is not possible to cover every aspect of nursing education news in an article. Each Nurse Corps officer, after reviewing the BUMEDINST pertaining to their area of interest, should contact the Director, Nursing Service, the Nursing Educational office or HSETC for further information. We are here to serve you and encourage your questions, ideas, and suggestions.

Quantico Relief Force Practices Medicine

On 17 July 1979, VADM Willard P. Arentzen (MC), led a contingent of 30 physicians from NNMC and BUMED to Quantico, Va., to help with a massive medical screening program for Marine Corps officer candidates. This was the third of three physical exam days this summer at Quantico and the third attended by the

Washington area physicians. Overall, 2,674 candidates were examined, 950 on the 17th alone.

The long day began at 0600 at the Mann Hall branch clinic, where the candidates were given dental exams. The physicals and immunizations followed at the hospital. The last candidate was processed by 1545.

"It was a very hectic day for the physicians taking part," said CDR James Erie (MSC), Commanding Officer of NRMCMC Quantico. Yet the doctors who participated found it a welcome break from the routine duties most of them are accustomed to. All enjoyed the opportunity to perform additional direct patient care.

Intraoral Removal of a Large Submandibular Gland Sialolith

CDR Michael T. Ridley, DC, USN

LCDR R. Sidney Jones, DC, USN

LT G.B. Ingraham III, DC, USNR

The intraoral removal of a large submandibular duct sialolith is the subject of this report. It is of further interest because of its size, shape, and duration.

A 30-year-old Caucasian male was referred to the Naval Regional Medical Center, Charleston, S.C. on 13 April 1978, for treatment of pain and swelling in the right submandibular area and floor of mouth, and with some mild degree of dysphagia.

Past medical records revealed a long history, at least 20 years, of pain and slight swelling during and after eating; however, the swelling and pain usually subsided in one to two hours and was not a constant finding after meals. The patient sought no treatment for this as he attributed it to the hot spicy foods frequently served in his home. Four days prior to examination, he experienced pain of a longer duration and marked swelling that failed to subside. Exudate from the duct on the right side had only been noted one time during the entire history of pain and swelling, that being four months prior to examination. The remainder of the medical history was noncontributory to the chief complaint.

Physical examination revealed a well-developed, well-nourished Caucasian male in no acute distress. The right submandibular gland was moderately swollen and painful to palpation. Examination of the oral cavity revealed dentition in a good state of health. Soft tissues of the oral mucosa were unremarkable except for the mucosa of the right floor which was moderately elevated, slightly erythematous and tender to palpation. Bimanual intra and extraoral examination of the sub-

mandibular glands and Wharton's ducts revealed normal structures on the left side while the right was moderately swollen, indurated, and painful to palpation. The right Wharton's duct was occluded as evidenced by failure to express fluid from the duct. Further examination revealed an indurated mass approximately 2 cm from the orifice along the course of the right Wharton's duct. Panorex and occlusal radiographs confirmed the presence of a rather large sialolith in the right Wharton's duct approximately 2 cm from the orifice (Figure 1).

Treatment

On 14 April 1978, the patient was prepared for intraoral removal of the sialolith. Using local anesthesia supplemented with intravenous sedation, the right submandibular duct was dilated with progressively larger lacrimal probes. The operator then made an incision over the probe from the orifice to a point approximately 2 cm proximal to the orifice of the submandibular duct. Using blunt dissection, the sialolith was visualized and removed in one piece with Adson-Brown forceps (Figure 2). Hemostasis was easily obtained with pressure and the wound left open to granulate in secondarily. Copious amounts of normal saline was used to irrigate the duct and remove any residue of the sialolith.

Three weeks postoperatively, the operative site had essentially healed and the patient experienced no discomfort or swelling. The right Wharton's duct was patent, and copious, clear saliva could be milked from the duct. The only remarkable feature of the operative site was an elongated orifice of approximately 3mm where secondary healing of the duct was still progressing.

The sialolith was whitish yellow in color, weighed 1.6

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FIGURE 1. Panorex showing sialolith.



FIGURE 2. Removal of sialolith

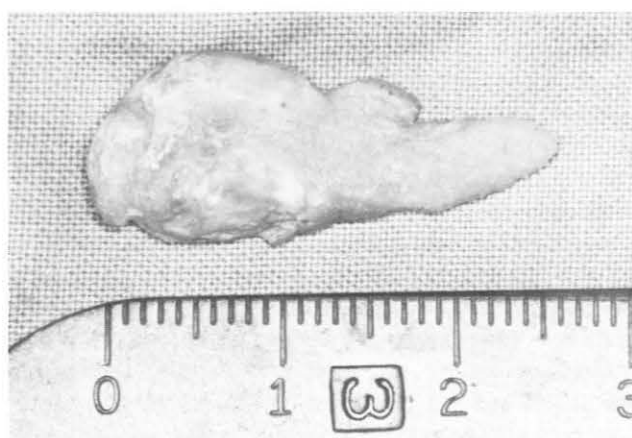


FIGURE 3. The sialolith measured 27 mm x 11 mm.

grams, and measured approximately 27 mm x 11 mm, with an essentially elliptical cross-section to the long axis. It tapered off in the duct and was very similar in shape to a large canine tooth (Figure 3).

Discussion

Thoma states that salivary sialoliths are not uncommon, having been found in one percent of the patients coming to autopsy. Submandibular glands and ducts in fact account for 92 percent of all salivary gland sialoliths. (1) Nor are large salivary gland sialoliths exceptional findings. Many weigh 5 to 15 grams and several larger ones have been reported. (2) Carr, in 1965, reported a stone removed from a Wharton's duct of similar size and shape to the one reported herein. (3) The interesting point in this case is not only the size and shape of the sialolith, but also the duration of the symptoms before the patient sought treatment. The average patient usually has had symptoms of sialolithiasis of the submandibular gland for a year and a

half before seeking attention! The patient in this case had symptoms since childhood, but had sought treatment only when the condition became acute. It is also surprising that this sialolith had never been diagnosed during any of the patient's induction, annual, or triannual physical examinations; he had been in the armed services for 10 years. This fact illustrates the importance of palpating biannually the structures of the floor of the mouth, parotid glands and ducts, and submandibular areas, as well as the cervical and mental lymph nodes. The procedure should be part of every clinician's routine head and neck examination.

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—Photos by HM2 Martin A. Gurnik

Nutritional Support: The Use of Assessment Principles and a Nutritional Preparations Formulary

LT Steven R. Lamar, MSC, USN

Laurie S. Hursig, RD

Comprehensive nutritional support is a factor of major importance in the treatment, palliation, and prevention of disease. It is the physician's obligation to recognize that significant clinical relationships exist between a patient's nutritional status and the eventual outcome of the disease process.⁽¹⁾ Therefore, the development of an appropriate treatment regimen which includes proper nutritional management is requisite to providing total patient care. Recent advances in the clinical application of nutritional assessment techniques and the current availability of numerous adult nutritional formulas afford the physician an opportunity to more effectively manage this nutritional care responsibility. The purpose of this paper is to acquaint the clinician with the basic concepts of nutritional assessment and to introduce a *Nutritional Preparations Formulary*.⁽²⁾ This formulary has been developed to assist the physician in the prescription of formula diets most compatible with patients' clinical problems and nutritional requirements.

Nutritional Status Evaluation

In recognition of this nutritional management responsibility, today's clinician now places considerable emphasis on the establishment and maintenance of an optimal nutritional status in order to minimize the complicating effects of malnutrition on the patient's hospital course. Increased morbidity and mortality,

depressed cell-mediated immunity, delayed wound-healing, and increased susceptibility to infection are all potential consequences of inadequate or ineffective nutritional management.⁽³⁾

Positive nutritional support, responsive to specific nutritional and metabolic requirements, must be preceded by a thorough understanding of the patient's present nutritional status. A useful nutritional assessment protocol provides the clinician with the means of identifying the presence of nutritional deficiencies and directs appropriate corrective nutritional therapy. The basic components of the typical nutritional assessment methodology are the patient's history (e.g. medical, surgical, social, psychological, and diet), anthropometry, and specific nutrition-related laboratory tests.⁽⁴⁾ Traditional nutritional assessment methods require the development of a nutritional/metabolic profile, which may include the following parameters:⁽⁵⁾

- Height
- Weight
- Basal energy expenditure in kilocalories per day
- Actual weight as a percentage of ideal weight
- Actual triceps skinfold thickness as a percentage of the standard value
- Actual mid-upper arm muscle circumference as a percentage of the standard value
- Creatinine/height index
- Serum albumin level
- Serum transferrin level or total iron-binding capacity
- Total lymphocyte count
- Measure of cell-mediated immunity (delayed hypersensitivity reaction)
- Nitrogen balance
- Apparent net protein utilization

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TABLE 1. Nutritional Assessment Summary

Patient's Name:		Nursing Unit/Room No.:		Date:	
Attending Physician:		Diagnosis:			
Height:	Admission Weight:	Present Weight:	Desirable Weight:		

Standard Parameters	Patient Values	Assessment		
		90% Std. *	60-90% Std. **	60% Std. ***
Weight/height	Kg cm			
Triceps Skin-fold (TSF)	mm			
Mid-Arm Circumference (MAC)	cm			
Mid-Arm Muscle Circumference (MAMC) MAMC (cm) = MAC (cm) - (3.14 X TSF (cm))	cm			
Total Lymphocyte Count	mm ³			
Serum Albumin	g/100ml			
Total Iron Binding Capacity (TIBC)	mcg/100ml	X	X	X
Transferrin Serum transferrin = (0.8 X TIBC) - 43	mg/100ml			
Urinary Creatinine	mg	X	X	X
Creatinine Height Index (CHI) $CHI = \frac{\text{Actual Urinary Creatinine}}{\text{Ideal Urinary Creatinine}} \times 100$	%			

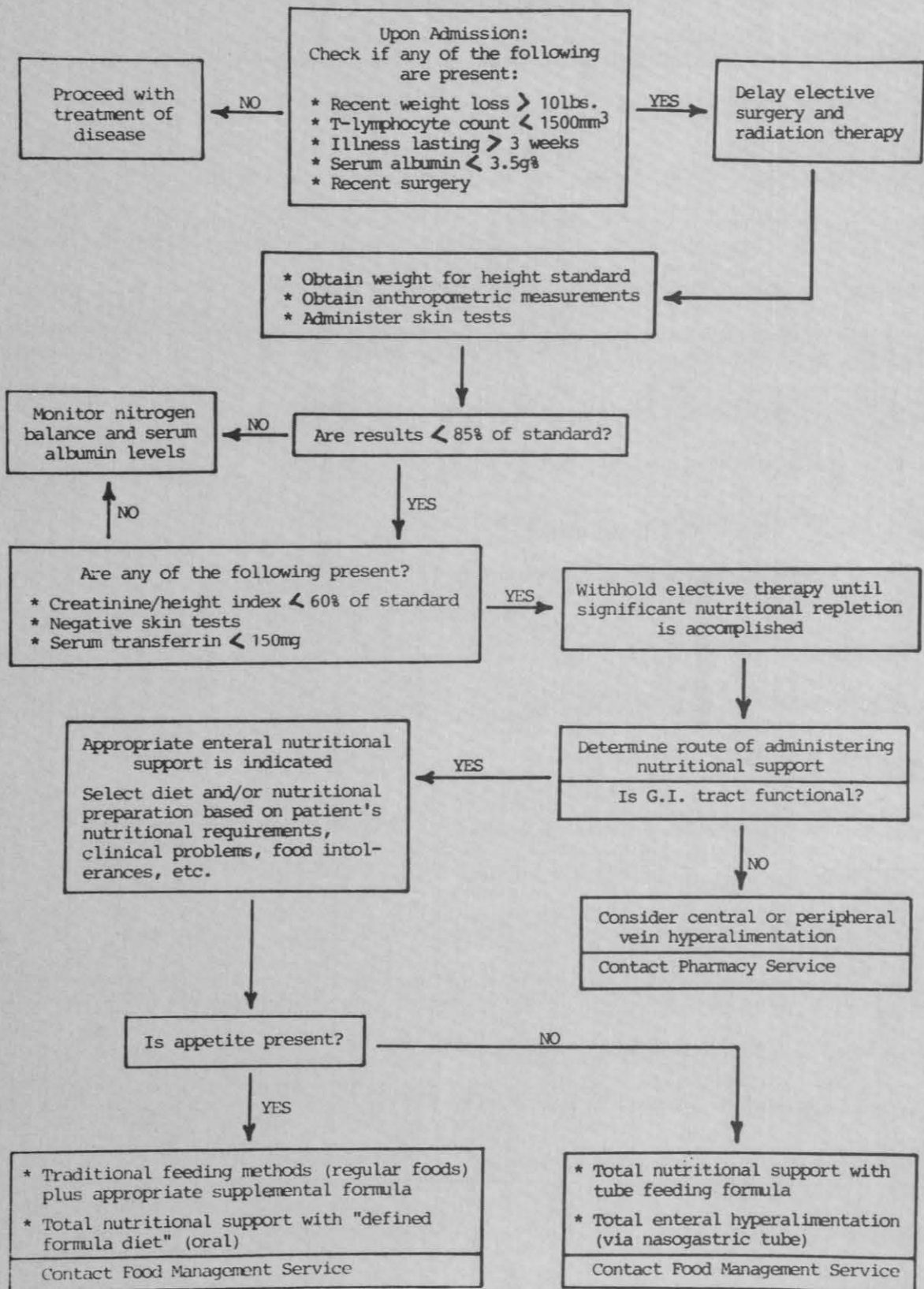
* Not Depleted	** Moderately Depleted	*** Severely Depleted
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Hematocrit: _____ %	Hemoglobin: _____ g/100 ml	Cellular Immunity: () Pos. () Neg.
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Dietary Intake Evaluation: Calories _____ Cal/24 hr	Protein _____ g/24 hr
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Protein Status: Nitrogen Balance = $\frac{\text{Protein Intake}}{6.25} - (\text{UUN} + 4)$	() Pos. () Neg.
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FIGURE 1. Nutritional Assessment Decision Tree



- Weight change as percent of usual weight (with time)
- Caloric intake as a multiple of basal energy expenditure
- Body surface area in square meters

The nutritional assessment process usually involves assembling data in tabular form to simplify evaluation. Table 1 illustrates an example of a nutritional/metabolic data summary form. Patients showing laboratory/anthropometric values within 90 percent of standard parameters are generally considered to demonstrate an acceptable nutritional status. A 60-90 percent deviation from standard values suggests moderate nutritional depletion; less than 60 percent of standard indicates severe depletion.⁽³⁾ Much of this information, such as height, weight, and serum albumin level, is collected routinely as a part of the general medical workup. Other data, such as anthropometric measurements, are easily obtained in the clinical setting. However, factors that may indicate current nutritional intake status, such as protein intake required for the calculation of nitrogen balance and net protein utilization, may not be readily available without efficient nutrient data processing systems.⁽⁶⁾ Once these data are assembled and evaluated, decisions concerning nutritional support requirements can best be made by logically progressing through an algorithmic Nutritional Assessment Decision Tree as shown in Figure 1.⁽⁷⁾

Methods of Achieving Optimal Nutritional Status

In many cases an optimal nutritional status is achieved by means of traditional feeding methods (i.e., regular food consumed by mouth). This typically involves the consumption of three nutritionally balanced meals per day. However, in order to meet the numerous and varied nutritional needs resulting from disease or injury, a patient's meals may require modification in one or more basic ways: nutrient content, food texture or consistency, and ingredient composition. These types of dietary modifications generally satisfy the nutritional needs of most patients. Nevertheless, in some instances an adequate consumption of oral food is not possible due to extreme dietary requirements, physical impediments, or psychological problems. Therefore, when these traditional patient feeding methods are not effective, the use of liquid nutritional preparations (i.e., defined formula diets) provides an important alternative in achieving and maintaining optimal nutritional status.

Severe dietary restrictions are often imposed in order

to accommodate altered metabolic states. Patients with major burns have significantly increased energy, protein, and vitamin/mineral requirements but may be unable to consume the large portions of food necessary to satisfy these requirements.⁽⁸⁾ Patients with hepatic encephalopathy require minimal protein but adequate calories. Acute renal failure may necessitate the institution of protein, electrolyte, and fluid restriction. However, all patients, regardless of the complexity of the dietary restrictions indicated by their disease process, require an intake capable of satisfying basic nutritional needs. Providing these modifications through the use of regular foods may not be realistically achievable without severely affecting the palatability and nutritional adequacy of the diet. On the other hand, the select administration of an appropriate nutritional preparation (i.e., defined formula diet) often compensates for these nutritional inadequacies without compromising the prescribed therapeutic restrictions.

Physical impediments and psychological problems may also preclude the consumption of nutritionally complete regular meals. The use of liquid formulas is frequently indicated for patients with impaired mastication, mandibular fractures, or anorexia secondary to disease processes or depression. When the ability to ingest even the liquid formula by mouth is impaired (e.g., in the comatose patient or in the absence of the swallowing reflex), the administration of defined formula diets via nasogastric tube may very well be the only means of achieving satisfactory enteral nutritional support. Additional clinical conditions that may indicate the use of defined formula diets are listed in Table 2.⁽²⁾

Nutritional Preparations Availability and Product Information

A large number of nutritional preparations (i.e., defined formula diets), significantly different in composition, nutrient content, and intended route of administration, are now available commercially. Some formulas have been developed for highly specific clinical conditions, whereas other formulas are multipurpose and have a variety of potential clinical applications. The physician, attempting to select the most appropriate formula, may feel overwhelmed by the large number and wide variety of formulas from which to choose. Further confusion concerning formula selection may also be caused by the lack of readily available product data and by the frequent paucity of these data. To assist the physician and nutritionist in the prescription of formula diets most compatible with patient's clinical problems and nutritional requirements, a manual

FIGURE 2. Nutritional Preparations Data Sheet

PRODUCT NAME: SUSTACAL* LIQUID (Mead Johnson)		Available from Food Management Service:
PRODUCT TYPE: Multipurpose, Nutritionally Complete Formula for Total/Supplemental Use		
Container/Packaging Information: Available in 8, 12, and 32 fl-oz cans (liquid). Packed 12-8oz/12oz cans/case; 6-32oz cans/case.		Flavors: Vanilla Chocolate

PRODUCT COMPOSITION: Intact Protein Containing Milk, Protein Isolates-Low Residue		
<u>Protein Source:</u> Concentrated Skim Milk Na + Ca Caseinate Soy Protein Isolate Gluten Free	<u>Fat Source:</u> Soy Oil P:S Ratio - 3.0:1.0	<u>Carbohydrate Source:</u> Sucrose Corn Syrup Solids
<u>% Cal. from Protein:</u> 24%	<u>% Cal. from Fat:</u> 21%	<u>% Cal. from Carbohydrate:</u> 55%

NUTRITIONAL ANALYSIS:	Per: 12 fl-oz (1 Can)	Per 1000 ml (Standard Dilution)
Calories Kcal	360	1000
Protein g	21.7	60.3
Fat g	8.3	23.1
Cholesterol mg	5	13.9
Carbohydrate g	49.6	137.8
Lactose g	6	16.7

COST: 1000ml/gm Pro. (Standard Dilution)	CALORIC CONCENTRATION (Standard Dilution) 1 Cal/ml	Kcal/N RATIO 104	OSMOLALITY (Standard Dilution) 625 mOsm/Kg
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STORAGE REQUIREMENTS: After opening, product should be covered and refrigerated if not used immediately. Unused portions should be discarded after 24 hrs.	VOLUME at Standard Dilution Required to Provide 100% of the RDA for all known essential nutrients: <div style="text-align: right; margin-top: 10px;">1080 ml</div>
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*A defined nutritional preparation

FIGURE 3. Sustacal Liquid

VITAMIN ANALYSIS:	Per: 12 fl-oz (1 Can)	Per 1000 ml (Standard Dilution)
Vitamin A IU	1670	4630
Vitamin D IU	133	370
Vitamin E IU	10	28
Vitamin C mg	20	56
Folic Acid mg	0.133	0.37
Thiamin (Vit. B1) mg	0.5	1.39
Riboflavin (Vit. B2) mg	0.6	1.67
Niacin mg	7	19.4
Vitamin B6 mg	0.7	1.9
Vitamin B12 mcg	2	5.6
Biotin mg	0.1	0.28
Pantothenic Acid mg	3.5	9.7

MINERAL ANALYSIS:	Per: 12 fl-oz (1 Can)	Per 1000 ml (Standard Dilution)
Calcium mg	360	1000
Phosphorus mg	330	926
Iodine mcg	50	139
Iron mg	6	16.7
Magnesium mg	135	375
Copper mg	0.7	1.9
Zinc mg	5	13.9
Sodium mg	133 (14.5 mEq)	926 (40.3 mEq)
Potassium mg	740 (18.9 mEq)	2055 (52.7 mEq)
Chloride mg	560	1556
Manganese mg	1	2.8

**TABLE 2. Nutritional Preparations:
Indications for Use**

The following clinical conditions frequently necessitate the use of "Defined Formula Diets" to improve and maintain nutritional status:

Gastrointestinal

Inflammatory bowel disease
Malabsorption syndromes
Fistulas
Chemotherapeutic and radiation enteropathy
Pancreatic dysfunction
Partial bowel obstruction or esophageal stricture
G.I. tract not challenged by food for extended period

Neurological

Cerebral vascular accident
Semiconsciousness or coma
Traumatic nerve damage
Palsies or paralysis

Hypermetabolic

Severe trauma
Major burns
Major sepsis

Surgical

Oral surgery
Pre and post surgical nutritional management
Plastic surgery
Radical surgery of alimentary tract, neck, or upper respiratory system

Physical

Impaired mastication
Severe injury; large wound surfaces
Convalescence following severe illness or injury
Multiple fractures; mandibular fractures
Extensive blood loss or tissue damage
Debilitation due to senility or terminal disease

Psychological

Anorexia; cachexia
Severe depression
Food prejudice
Mental retardation

Inborn Errors of Metabolism

*Acute and Chronic Renal Failure/Acute Liver Failure
Advanced or Metastatic Carcinoma*

Other

Adjunct to or in transition from IV hyperalimentation
Nonallergenic food source
Toilet management problems; fecal incontinence

Source: "Nutritional Preparations Formulary." (2)

**TABLE 3. Products Included in Nutritional
Preparations Formulary**

Amin-Aid	Low Sodium Provida	Precision LR
Carnacal	Magnacal-M	Provida
Citroprotein	Meritene	Renu
Compleat-B	MCT Oil	Sumacal
Controlyte	Nutri-1000	Support-B
Ensure	Nutri-1000LF	Sustacal
Ensure Plus	Osmolite	Sustagen
Flexical	Polycose	Vital
Formula 2	Portagen	Vitaneed
Isocal	Precision HN	Vivonex
Lonalac	Precision Isotonic	Vivonex HN

providing detailed product information has been developed. (2) This manual, entitled *Nutritional Preparations Formulary*, provides complete, up-to-date product data relevant to the nutritional management responsibilities of the clinician.*

The product information and nutrient data contained in the *Nutritional Preparations Formulary* are organized in four main sections: Indications for Use, Product Listing/Product Type Definition, Data Comparison, individual formula Data Sheets. The manual contains a Nutritional Assessment Decision Tree (Figure 1) which is intended to be used interactively with the diagnoses listed in Table 2 in order to best determine the need for nutritional support by formula administration. There are 33 nutritional preparations (i.e., defined formula diets) addressed in this formulary as listed in Table 3. The Nutritional Preparations Data Comparison chart, reproduced in an abbreviated form in Table 4, summarizes selected data descriptive of these 33 formulas and compares individual formula characteristics to facilitate product selection. The bulk of the *Nutritional Preparations Formulary* consists of Nutritional Preparations Data Sheets, which provide more comprehensive, detailed information on an individual formula basis. Figures 2 and 3 represent sample Nutritional Preparations Data Sheets.

The *Nutritional Preparations Formulary* developed for use at the Naval Regional Medical Center, Camp Pendleton, Calif., also contains the NRMC Instruction describing the Administration of Nutritional Prepara-

*Navy requesters may obtain copies of the *Nutritional Preparations Formulary* from the Medical Service Corps (MED 23) at BUMED.

TABLE 4. Nutritional Preparations Data Comparison

PRODUCT NAME	Avail- able	Nutri- tionally Complete	Volume (ml) Required to meet RDA	Cal/N Ratio	Cal/ml	Osmolality mOsm/Kg)	Route of Admin.*	Essen- tially Elemental
Ensure Plus		X	2000	171	1.50	600	O	
ControlYTE			N/A	N/A	2.00	598	O	
Vivonex HN		X	3000	150	1.00	850	O/NG	X

* Recommended Route of Administration- O=Oral NG=Nasogastric (Tube)

PRODUCT NAME	Low Residue	Moderate Residue	Lactose Free	Gluten Free	Minimal Protein	Minimal Fat	Contains MCT	Low K**	Low Na*		
Ensure Plus	X		X	X							
ControlYTE	X		X	X	X			X	X		
Vivonex HN	X		X	X		X		X			

*Preparations classified as Low Na contain ≤ 500 mg Na per 1000 Calories

**Preparations classified as Low K contain ≤ 750 mg K per 1000 Calories

Source: Nutritional Preparations Formulary.(2)

tions/Defined Formula Diets.(9) The purpose of the Instruction is to promulgate a standard policy for the selection, ordering, and administration of nutritional supplements, tube-feeding formulas, and enteral hyperalimentation solutions. It should be emphasized that the *Nutritional Preparations Formulary* does not promote the use of specific products, but rather provides the information base required by clinicians to make reasonable decisions concerning defined formula diet selection and product administration.

Summary

The use of a reliable nutritional assessment protocol provides the clinician with the means of identifying the presence of nutritional deficiencies and directs the appropriate corrective nutritional therapy. When traditional feeding methods are ineffective (due to significantly altered metabolic states, severe dietary restrictions, physical impediments, or psychological problems), defined formula diets provide an alternative means of achieving and maintaining optimal nutritional status. The *Nutritional Preparations Formulary* developed at the Naval Regional Medical Center, Camp Pendleton, simplifies formula diet selection by provid-

ing current data on commercially available products and assists the clinician in the nutritional support aspects of patient care.

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NOTES & ANNOUNCEMENTS

MEDICAL SERVICE CORPS EDUCATION AND TRAINING PROGRAMS

In considering full-time training, MSC officers must evaluate the value of the training to his or her profession, designator, projected rotation date, and obligated service incurred for training. Similarly, goals relating to continuing education should be evaluated on the basis of available opportunities during each future year, the educational and professional relevance of these opportunities as well as the costs involved.

In most cases, the programs listed below are available to all MSC officers. Applications for full-time training are due by 1 Sept 1979 each year. Part-time training and continuing education applications are due in HSETC six weeks prior to commencement of the course requested.

Full-time Duty Under Instruction (BUMEDINST 1520.12). The various inservice and outservice programs available are listed below. There is an active duty obligation incurred for all full-time training over 26 weeks in length. BUMEDINST 1520.12 lists the active duty obligation incurred for participation in each program.

Training in Civilian Institutions. Up to two years of undergraduate or graduate education at civilian educational institutions may be provided to meet the training needs of the various specialties.

U.S. Army/Baylor University Program in Health Care Administration, Fort Sam Houston, Tex. This is a two-phase masters degree program in health care administration. Forty-two weeks of didactic instruction at the Academy of Health Sciences, Fort Sam Houston, Tex., is followed by a 52-week administrative residency at selected naval medical facilities.

Naval Postgraduate School, Monterey, Calif. This institution offers masters level education in computer systems, financial, personnel, or human resource management. Program length varies from 12 to 18 months depending upon previous training.

Naval School of Health Sciences, Bethesda, Md.

- *Health Care Administration Program.* This 9-month curriculum offers both health care administration theory and application to prepare MSC officers for

Navy health care managerial positions. Successful completion of the program and other academic requirements of the George Washington University may lead to the attainment of the Bachelor of Science degree in Health Care Administration.

- *Financial and Supply Management Training Course.* This 12-week course is designed to prepare MSC officers for entry level positions in Medical Department financial and supply management.

- *Patient Services Course.* A 5-week program that provides introductory training in patient services administration to MSC officers.

Armed Forces Staff College, Norfolk, Va. This 9-month program offers a unique educational opportunity to study the concepts and principles of joint and combined military operations. The learning experiences of this program provide the student with an understanding of the U.S. military capability and the environment in which it operates, while currently applying traditional service dogma to joint and combined operations.

Industrial College of the Armed Forces, Fort McNair, Washington, D.C. A 10-month graduate level program in national security with emphasis on management of national resources under current and predicted environments. Included is the study of both national and world interrelated military, economic, political, scientific, and social factors, with the objective of enhancing the preparation of selected military officers for positions of high trust in the national and international security structures.

Marine Corps Development and Education Command, Quantico, Va.

- *Amphibious Warfare Course.* A 9-month professional military education program to prepare MSC officers for command and staff duties at battalion, squadron, regiment, group, and Marine amphibious brigade levels. Included is instruction in support provided by the Navy in the conduct of amphibious operations, command relationships, and interstaff coordination requirements.

- *Command and Staff College.* This course provides professional military education for command and staff

duty within the Marine Corps. It stresses the planning and conduct of force-in-readiness operations as a component of the balanced fleet. The course includes military management with emphasis on decision making, planning, programming, budgeting, and the use of computers. Considerable emphasis is placed on executive leadership and effective communications. This is a 10-month program.

Blood Bank Fellowship at Walter Reed Army Medical Center, Washington, D.C. This 1-year course is designed to prepare Medical Technologists in the laboratory science field as blood bank directors. The program of instruction includes all phases of military blood banking, blood grouping, and blood transfusion.

Pharmacy Residency at NNMCM Bethesda, Md., and NRMCM San Diego, Calif. Provides a postgraduate learning experience in institutional pharmacy practice. This program is certified by the American Society of Hospital Pharmacists and is 1 year in length.

Podiatry Residency at NRMCM Oakland, Calif. This 1-year curriculum is designed to provide podiatric officers with a broad knowledge of the disciplines of medicine and surgery that relate significantly to the practice of military podiatry.

Part-time Training (BUMEDINST 1500.7). This program provides partial sponsorship to officers taking evening or weekend courses in accredited civilian institutions. Courses requested must be directly related to areas of Medical Department responsibility and associated with a degree attainment program. This program also permits those officers interested in full-time training to begin advanced work on their degrees prior to selection for full-time training. The active duty obligation incurred for this program is 2 years following completion of the last approved course taken.

Continuing Education (BUMEDINST 4651.1). Continuing education is essential for maintaining professional competence in light of the rapid changes in the technology, administration, and delivery of health care, and the increasing emphasis on accountability. Participation in short courses and seminars as set forth in this program is one means through which MSC officers can keep abreast of the latest advances and events in their profession.

The reporting of all educational achievements to the Naval Military Personnel Command (NMPC), BUMED and HSETC is extremely important as this information

becomes part of an officer's permanent record and is used in any decision making process such as assignment and promotion.

Further assistance may be obtained by contacting LCDR Anthony R. Arnold, MSC, USN, Director, Medical Service Corps Programs at the Naval Health Sciences Education and Training Command (Code 6), National Naval Medical Center, Bethesda, Md. 20014. Telephone: Autovon 295-0625, Commercial (202) 295-0625.

ATTENTION NAVY AUTHORS

Many articles by Navy personnel appear each year in a variety of professional journals and other publications. *U.S. Navy Medicine* would like to include a monthly list of some of these articles written by Navy authors from all corps. If you have published recently and would like to share your research or perceptions with your colleagues, please send us the title, name, and issue of the publication in which your article appeared.

AMSUS ANNUAL MEETING

The 86th Annual Meeting of the Association of Military Surgeons of the United States will be held from 2-6 Oct 1979 at the Town and Country Hotel, San Diego, Calif.

The meeting will emphasize continuing health education and professional excellence. Structured around a core program and supplemented by various section meetings and symposiums will be scientific and professional presentations and panels of the highest caliber, with many distinguished guest speakers.

Attendance at the 85th Annual Meeting was over 3,500 and attendance at the 86th Annual Meeting is anticipated to be upwards of 4,000. Included will be distinguished international medical leaders and the Commanders and Directors of some 384 major hospitals within the Federal Medical System.

As an organization accredited for continuing health care education, the Naval Health Sciences Education and Training Command, Bethesda, Md., certifies that the activities designated Category I in the Convention Program meet the criteria for that discipline, on an hour-for-hour basis.

Naval Reserve Section 3-5 Oct 1979 (Category I)

Chairman: CAPT Clarence J. Gibbs, Jr., MSC, USNR-R; USNR Session I: Symposium on Nuclear Disasters: CDR Attila Felsoory, MC, USNR-R and Team;

USNR Session II: "Parasitic Diseases of Military Significance": CAPT J. Cerda, MC, USNR-R; USNR Session III: "Alcohol and Drug Abuse: Mobilization Readiness": Speaker: To be announced; USNR Session IV: "Tropical Diseases of Military Significance": Speaker: To be announced.

The West Coast Nursing Symposium (Category I) presented by the Navy Nurse Corps under the sponsorship of the Naval Health Sciences Education and Training Command will be held in conjunction with the AMSUS meeting. The symposium is approved for 10 continuing education contact hours.

The Oral Diagnosis Continuing Education Course (Category I) presented by the San Diego Naval Regional Dental Center will also be held in conjunction with the AMSUS meeting. This 21-credit-hour program will provide a unique learning experience in oral diagnosis and medicine.

For further information and an advanced registration form, write: Association of Military Surgeons of the U.S., P.O. Box 104, Kensington, Md. 20795.

UNIVERSITY OF CALIFORNIA COURSE

The Department of Extended Programs in Medical Education at the University of California School of Medicine will sponsor the following course:

Rheumatology Update—1979 18-20 Oct 1979

This course is designed to provide the practicing internist and rheumatologist with an update on current developments in the field of rheumatology. The course will concentrate on the clinical relevance of these new developments for the practicing physician.

Topics to be covered include infections and the rheumatic disease, the connective tissue diseases, newer aspects in treatment of rheumatic diseases, and the role of the laboratory in managing rheumatic diseases.

For more information write or call: Extended Programs in Medical Education, University of California, Room 569-U, Third and Parnassus Ave., San Francisco, Calif. 94143. Telephone (415) 666-4251.

PREVENTION OF COLD WEATHER INJURIES

The Naval Health Sciences Education and Training Command (HSETC) in cooperation with Walter Reed Army Medical Center has produced a predeployment videotape titled "Prevention of Cold Weather Injuries," VM-11709. The program, narrated by Dr. Murray Hamlet of the Army Research Institute of En-

vironmental Medicine, discusses the impact of cold environments upon the individual's body. He also discusses preventive measures that reduce the incidence of various kinds of cold injuries.

Copies of the videotape have been distributed to all naval hospital film libraries. In addition, they may be borrowed from: Audiovisual Resources Branch (Code 221), HSETC, National Naval Medical Center, Bethesda, Md. 20014. Telephone: Autovon 295-1226 or Commercial (202) 295-1226.

A CALL FOR ARTICLES

U.S. Navy Medicine is requesting articles from field activities on topics associated with management within the ambulatory care environment. If you have original material on subjects which you feel may be of interest to other activities (i.e. outpatient records management, central appointment systems, outpatient budget requirements, etc.), please forward it for consideration. Articles of an activity or program description nature are welcome and should be received in this office by 15 Oct 1979.

NAVY RECEPTION AT ACS MEETING

During the American College of Surgeons annual meeting, a Navy reception will be held 24 Oct 1979, from 1800 to 2000, in the Upper Summit Room of the Conrad Hilton Hotel, Chicago. For further information, contact: CAPT Robert R. Abbe, MC, USN, Chief of Surgery, Naval Regional Medical Center, Great Lakes, Ill. 60088. Telephone: Autovon 792-3629, Commercial (312) 688-3629.

AEROSPACE PHYSIOLOGISTS RECEIVE SPECIAL RECOGNITION

At a recent annual meeting of the Aerospace Physiologist Society of the Aerospace Medical Association, two of the three annual awards were presented to Navy aerospace physiologists. LCDR W.W. McIntosh, Head, Aviation Physiology Water Survival and Technical Office, BUMED, received the Fred A. Hitchcock Award for Excellence in Aerospace Physiology. LT Curtis Glenn Armstrong, Jr., Aerospace Medical Safety Officer, Naval Hospital, Cherry Point, N.C., received the Wiley Post Award for Operational Physiology.

In addition to these honors won by Navy MSC officers, the Aerospace Physiologist Society, the membership of which is made up of civilian and federal representation, elected CDR Paul D. Furr, (NMRDC/NAV-MAT) as President-elect for the 1980-81 term of office.

PHYSICIAN'S ASSISTANTS ABOARD CARRIERS

BUMED is currently implementing a plan to augment the health care delivery teams by assigning Physicians Assistants (PAs) aboard all Aircraft Carriers. Their purpose will not be to replace physicians but rather to assist them as qualified and competent physician extenders. All but three carriers currently have PAs assigned and the remainder are scheduled to receive theirs at an appropriate date. For additional information, please see BUMEDINST 6550.5.

SOME HOME MONITORS NOW COVERED BY CHAMPUS

Home monitors to protect youngsters with prolonged apnea against sudden infant death, or crib death, have been added to the CHAMPUS benefits package.

To be covered, a monitor must be specifically prescribed by a physician who has diagnosed the infant as having prolonged apnea, a condition in which breathing stops for 20 seconds or longer. Prolonged apnea also includes stoppage of breathing for less than 20 seconds when associated with slowness of heartbeat, bluish discoloration of the skin or mucous membrane caused by too much or too little hemoglobin in the bloodstream, or absence of color in the skin.

A documentation of both the episode or episodes that led to a diagnosis of prolonged apnea and the prescription for the home monitor must be included with the first claim for the equipment. That claim must also include certification by the physician that he or she will maintain close, continuing supervision of the infant.

Generally, CHAMPUS benefits will be payable only for rental of a home monitor. The only exception will occur when the organization that processes the claim (a CHAMPUS fiscal intermediary) determines that purchase would be less costly and approves a lease/purchase arrangement.

Rental or lease payments made after 1 April 1978, will be considered for CHAMPUS cost sharing. Previously, such equipment had been excluded from the CHAMPUS benefits package because it was considered to play a preventive role only. Recently, however, home monitors have evolved into an effective tool for managing prolonged apnea and preventing sudden infant death.

CHAMPUS officials have noted several services and supplies connected with home monitors that are *not* covered by the Program. These include:

- A back-up electrical system or any alteration to living space required for the monitor.
- Parental training sessions, including training in cardiopulmonary resuscitation or instruction in the use of the monitor when identified as a separate charge.
- Any charge on the part of the company providing the monitor for making available medical, technical, and counseling assistance.
- Hospitalization for monitoring a child with diagnosed prolonged apnea unless hospitalization is necessary to treat underlying diseases or medical conditions that might be contributing to the problem.

For additional information, contact a CHAMPUS advisor or fiscal intermediary. Information can also be obtained from OCHAMPUS, Aurora, Colo. 80045.

NAVAL MEDICAL CENTER SIGNS AGREEMENT WITH NATIONAL CANCER INSTITUTE

A General Memorandum of Understanding between the National Cancer Institute (NCI) and the National Naval Medical Center (NNMC), Bethesda, Md., was signed on 18 July 1979 for the initiation of a collaborative research program in medical oncology. The NNMC will provide ward and laboratory space to accommodate a Medical Oncology Branch of the Division of Cancer Treatment, NCI. This branch will provide medical care for cancer patients at the NNMC and will conduct collaborative research in the treatment of cancer.

This link-up will provide closer ties between these neighboring institutions and will take advantage of unique resources not otherwise available to the other. The signatories of the agreement—VADM W.P. Arentzen (MC), Surgeon General, RADM Joseph T. Horgan (MC), Commanding Officer, National Naval Medical Center; Dr. Thomas Malone, Deputy Director, National Institutes of Health; and Dr. Arthur C. Upton, Director, National Cancer Institute—made clear in their remarks their major commitment to the success of this unique venture. They emphasized the efficiency and economy that this agreement will accomplish in the furtherance of the joint mission of the two institutions concerned.

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